

Mathematics & NSA: A Long Term Partnership



2004

Summer Institute

for

Middle School

Mathematics Teachers

Middle School mathematics and science teachers are invited to apply to attend the 2004 National Security Agency (NSA) Summer Institute:

- Held **June 28-July 2, 2004**
- Hosted by **Anne Arundel County (Maryland) Public Schools**

Successful applicants:

- **Learn and apply** the latest techniques for mathematics classrooms
- **Co-author** learning units for publication and distribution nationwide
- Receive a **stipend** of **\$500**
- Receive **free** manipulatives and other valuable **educational supplies**
- May receive **in-service** credits
- Receive a **continental breakfast and lunch** each day

Participants can expect to work hard and have fun in a **professional, energetic, fast-paced environment**. The enclosed application must be postmarked **no later than 9 April, 2004**.

WHAT IS THE SUMMER INSTITUTE FOR MATHEMATICS TEACHERS?

In partnership with Anne Arundel County Public Schools, the National Security Agency's Mathematics Education Partnership Program sponsors Summer Institutes for Mathematics Teachers (SIMT). These Institutes provide teachers an **intensive five-day opportunity** to learn and apply the **latest techniques for mathematics classrooms** using a wide variety of methods and technology.

During the week-long institute, participants will **attend two of four strands**:

- Algebraic Reasoning - topics will include variables, operations, and functions with problem solving in small groups.
- Geometric Reasoning- emphasis will be on conceptual understanding, multiple representations, mathematical modeling, and problem solving.
- Reasoning about Probability - topics will include probability models, statistical graphing, and applications of probability and statistics.
- Proportional Reasoning - recognize quantities that are related proportionally, using tables, numbers, graphs, and equations to investigate these quantities and their relationships.

Each of these strands is in accordance with the NCTM Standards and will be interwoven with the use of the TI-73 graphing calculator. In addition, participants will attend **special lectures** by NSA mathematicians on topics such as cryptanalysis, mathematical thinking, and coding theory.

Participants will be part of a team that will **develop a learning unit** designed to incorporate the Maryland State Core Learning Goals and the NCTM Standards. NSA maintains ownership of the learning units and publishes and distributes them free of charge upon request from educational institutions or teachers. They may also be available via the Internet.

Participants will be required to attend **two follow-up sessions**, one in the fall and one in the spring (probably Dec. 8, 2004 and Mar. 1, 2005). During these sessions, they make final changes to the learning units, hear guest speakers, and present the learning units to the Institute.

Participants will receive a **\$500.00** stipend if they complete the entire 40-hour program during the summer and provide a learning unit suitable for review by representatives of the Maryland Council of Teachers of Mathematics. After attending both follow-up sessions, participants may receive **in-service credits** depending on the requirements of their state (MSDE has approved 3 in-service credits).

HOW CAN YOU BE A PART OF THE 2004 SIMT?

Middle School mathematics and science teachers are invited to apply. We are looking for both experienced and novice teachers from both public and private nonprofit schools. Most importantly, we are looking for teachers who are excited about teaching, who work well with others, and who like to participate!

THE NEXT STEP

The **enclosed application** must be completed, signed by both you and your principal, and **returned no later than 9 April 2004**. Neatness and thoroughness count! Incomplete applications will not be considered. You may attach one of your lesson plans or units as an example of your writing and planning skills.

Application

2004 Middle School Summer Institute for Mathematics Teachers

PLEASE TYPE OR PRINT CLEARLY

1. Name _____
last first middle initial

2. School where employed

name of school

street address

Public _____

Private _____

city/state/zip code

county where school is located

(area code) telephone number

e-mail address

3. Residence

(area code) telephone number

street address

city/state/zip code

4. Male/Female _____ Social Security Number _____

5. US Citizen? Yes _____ No _____ Date of Birth _____

6. Ethnicity African American _____ White _____ Hispanic _____ Native American _____
Asian/Pacific Islander _____ Other (Specify) _____

7. Number of years middle school teaching experience _____

8. Highest degree earned _____ area of specialization _____

9. Course(s) taught 2003-2004 school year _____

10. Have you ever attended a SIMT? _____ If yes, when? _____

11. Please indicate your preferences among the four strands being offered. Place a "1" by your first choice, "2" by your second choice, "3" by your third choice, and "4" by your fourth choice.

_____ Algebraic Reasoning

_____ Geometric Reasoning

_____ Reasoning about Probability

_____ Proportional Reasoning

Detach here

12. **Continuing Education** On a separate piece of paper, indicate:

Name of program

Host organization

Length

Date

Your role

13. **Reasons for Participating** **On a separate sheet of paper, state your plans and goals for enhancing middle school mathematics or science education and your reasons for participating in this institute.**

14. **Support of Administration** Your school principal must sign the following for you to be considered for the Institute:

I recommend this applicant for participation in the Institute. After completion of the Institute, I will support the applicant's efforts to convey the results of the institute to other teachers at my school **and I will support the applicant's attendance at the two follow-up sessions.** I understand that in order to be eligible for MSDE credits, the applicant must attend these follow-up sessions and that NSA will provide no reimbursements for substitutes. (Teachers from states outside the mid-Atlantic region are not required to attend the follow-up sessions if they are not interested in receiving MSDE credit). I also consent to the inclusion of my school's name and phone number on this applicant's learning units, which will be published and distributed by NSA, both in paper copy and on the Internet.

Principal's signature _____

Principal's name (printed) _____

15. **Applicant Consent Statement** You must sign the application in order to be considered for the institute.

I consent to NSA's ownership, publication, and distribution, both in paper copy and on the Internet of the learning units I write, to include my name, school name, and school phone number. I also consent to NSA's producing and using photographic or videotape images of me for purposes of including such images in informational packages regarding these institutes.

PRIVACY ACT STATEMENT: Auth: 10 U.S.C. § 2193; SSN: EO 9397. PURPOSE: administer cooperative agreements with area schools. ROUTINE USES: disclosure to (1) agency officials administering the program, (2) school cooperative agreement administrators and (3) teacher participants (contact information only). Disclosure of the information, including Social Security Numbers, is voluntary. Failure to furnish the requested information may result in non-selection, non-participation, or non-payment in the program. Your signature indicates you have read and understand the above.

Applicant's signature _____

Application must be postmarked by **April 9, 2004**. Send to:

**National Security Agency
9800 Savage Road Suite 6274
Ft. Meade, MD 20755-6274
ATTN: Chuck Brown, EL/MEPP, Room 2B6030**

Applications can be faxed to the MEPP at 443-479-1193, Attn: Chuck Brown
MEPP can be contacted via e-mail at the address cjbrown@nsa.gov